CLAIMS

1.   A system for multiparameter analysis of analytes, the system comprising:

(a)   primary supports with a largest dimension of 500 μm or less suspended in use in a fluid solution, wherein each primary support comprises identification means for identification thereof, and at least one primary analyte is bound to each primary support;

(b)   a secondary analyte suspended in use in the fluid solution; and

(c)   measuring means arranged in communication with the fluid solution for monitoring interaction between the primary analyte and secondary analyte,

c h a r a c t e r i s e d in that:

(d)   secondary supports with a largest dimension less than or equal to the largest dimension of the primary supports are suspended in use in the fluid solution, wherein each secondary support comprises identification means for identification thereof, and at least one secondary analyte is bound to each of the secondary supports; and

(e)   the measuring means is arranged to detect any post-reaction interaction between one or more primary analytes and one or more secondary analytes by detecting the identification means of the primary and secondary supports attached thereto.

2.   A system according to Claim 1, wherein the largest dimension of the primary support is less than 300 μm.

3.   A system according to Claim 2, wherein the largest dimension of the primary support is less than 150μm.

4.   A system according to Claim 3, wherein the largest dimension of the primary support is less than 50 μm.

5.   A system according to any one of Claims 1 to 4, wherein the largest dimension of the secondary support is less than that of the primary support.

6.   A system according to Claim 5, wherein the largest dimension of the secondary support is less than 100 μm.

7.   A system according to Claim 6, wherein the largest dimension of the secondary support is less than 50μm.

8.   A system according to Claim 7, wherein the largest dimension of the secondary support is less than 10 μm.

9.   A system according to any one of the preceding claims, wherein at least one of the identification means comprises one or more distinguishing geometrical features, such as shape, size, barcode or dotcode, enabling identification of each support.

10.   A system according to any one of the preceding claims, wherein at least one of the identification means is a radio frequency identification transponder (RFID).

11.   A system according to any one of the preceding claims, wherein at least one of the identification means is an optical identification, such as fluorescence or colour based.

12.   A system according to any one of the preceding claims, wherein the primary or secondary supports are only partially covered in their respective primary or secondary analyte.

13.   A system according to any one of the preceding claims, wherein the fluid solution is a liquid.

14.   A system according to Claim 13, wherein the liquid suspension is accommodated on a solid substrate, which substrate includes a main surface extending

substantially in a two dimensional plane and has tertiary analytes fixedly arranged thereon for positional identification.

15. A method of multiparameter analysis of analytes, the method including the steps of:

(a) providing at least one primary support with a largest dimension of 500 μm or less and with identification means for identification thereof;

(b) binding at least one primary analyte to each primary support;

(c) suspending the primary support with its primary analyte and a secondary analyte in a fluid solution; and

(d) providing measuring means in communication with the fluid solution for monitoring interaction between the primary analyte and the secondary analyte,
c h a r a c t e r i s e d in that the method further comprises the steps of:

(e) providing secondary supports with a largest dimension less than or equal to the largest dimension of the primary supports and with identification means for identification thereof;

(f) binding at least one secondary analyte to each of the secondary supports,

(g) suspending the secondary supports in use in the fluid solution, and

(h) arranging for the measuring means to detect any post-reaction interaction between one or more primary analytes and one or more secondary analytes by detecting the identification means of the primary and secondary supports attached thereto.

16. A system for multiparameter analysis of analytes substantially as hereinbefore described with reference to one or more of Figures 1 to 9b.

17. A method of multiparameter analysis of analytes substantially as hereinbefore described with reference to one or more of Figures 1 to 9b.